and it is judged that they were all used for handling hot glassware, on account of their length, and, in some cases, deformation.



Figure 3.17: A selection of glassworkers' tools (Red House Cone)

In addition the glassmakers would have had a selection of blowing irons, pontil rods, shears of various types and sizes, and various marvering blocks and moulds. In general these do not seem to have changed significantly over the centuries.

The equipment used for the rolled-plate making, obscuring, engraving, etc. will not be detailed here, as it seems fairly certain that the principal activities involved crown and cylinder window glass, although some large tenders to supply have been noted. Latterly, certain other items of glassware were made, some officially, and some probably unofficially. In both cases the equipment used was either fairly conventional, or has been described in other references

All the ancillary trades, such as the joiners, crate-makers, and so on would also have had their own specialised tools and equipment. It is clear that these would have changed over time with changing requirements in the manufacturing process.

Boilers and (steam) engines have been mentioned in passing. The form of the engine in use by 1870 is not known, and no attempt was made to find its foundation plan. By then it could have been a reciprocating engine with a flywheel using belting to drive a layshaft that ran through the building so that various individual drives could be taken off, again by belting, as required. This appears to be confirmed by the report of an accident in an undated newspaper cutting reproduced at the Scotch Horn Centre Nailsea.

The accident was reported as having occurred in the Glass House Saw Mills, when the, "Deceased got entangled in the shaft and drum ... The jury returned a verdict of *Accidental Death*, with a request that a pulley should be placed at the right hand of the sawyer, to communicate with the bell in the engine-room, to enable the engineer to stop the engine in case of accident."

## The Products

It will be apparent that the early products of the glassworks were bottles and crown glass. In

due course cylinder blown sheet glass became a significant product, eventually superseding crown glass. With the passage of time other forms of window glass were produced, such as rolled plate glass, and eventually, some non-window products emerged, but these were still made from window glass metal.



**Figure 3.18: Sample of Rolled plate glass** © Bristol Museums & Art Gallery

[Given by Mr George Abraham who had joined the Nailsea factory in 1870.]

This sample is of interest, because it identifies the company as the "Nailsea & Stourbridge Glass Co."

Eyres, in his 1911 letter [see Appendix 10], comments that, "the 'Lily' ... was got ready for the purpose of making rolled Plate Glass, a large quantity of which I

remember consigning to Crewe, and other large railway stations, for roofing purposes." There had been difficulties about the adoption of this method of production, as the patent was taken out by James Hartley in 1847, and was vigorously defended for its term by the other licensees, despite an apparent wish of Hartley to extend the scope. 43

A note in the Scotch Horn Centre, Nailsea, display states, "In about 1865 the acquisition of a glassworks at Stourbridge allowed Nailsea to import their ruby, blue, orange and white ornamental glass and produce elaborate coloured window panes." Presumably somewhat like the illustration; right.

Figure 3.19: Display window in Bristol City Museum © Bristol Museums & Art Gallery (Discontinuities in colour are due to reflections, or background.)

This illustration is included as an example of the sort of window that might have been constructed from the ornamental glass manufactured at Nailsea during the later years. As far as can be seen the patterns employed have not come from the extant pattern sheet – see Figure 3.20 below.

John M Eyres, a boy clerk in the glassworks in the 1860s, in a letter to H St George Gray dated July 1911, mentioned that after the end of 1862, "... it was several years before the Old House was again at work. When it resumed work, sheet glass only was made, until a little side furnace was built for one or two men to make fancy goods, such as propagators, cucumber glasses, rolling pins and glass shades."

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<sup>&</sup>lt;sup>43</sup> Chance, J F, 1919, pps. 77-79